

## Body structure of the macedonian population

Natasa Nakeva-Janevska - Biljana Zafirova - Biljana Bojadzieva Stojanoska - Elizabeta Chadikovska - Biljana Trpkovska

Institute of Anatomy, Faculty of Medicine, University "SS. Cyril and Methodius", Skopje, Macedonia

Establishing the structural components of the body: bone, muscle and fat is of great significance in sport orientation and selection as in entire biophysical development in young people. Nowadays, when there is hypokinetics in the modern world, there is a greater disbalance between active (muscle) and inactive (fat) components, which enlarge the value of "ballast" tissue. The material comprised personal files of 200 Macedonian examinees 14 years old, 100 females and 100 males. On the basis of manifested anthropometrical variables, structural components of the body are established, in Macedonian children at age 14 who live in Skopje area, living in approximately equal socio-economic conditions. For quantitative determination of the absolute values of the bone (O kg), muscle (M kg) and fat tissue (D kg), the dynamic anthropometric method by J. Meteigka was applied. At the age of 14 years, the absolute values of the bone mass (O kg) was 9.91 (17,04%) in the males and in the females it was 7,83 (14,63%). The muscle mass (M kg) was 31.52 (52,04%) in the males and 27.89 (51.49%) in the females. The fat structural component (D kg) was 7.18 (11.14 %) in males and 7.02 (12.32 %) in females. The difference among sexes in the Macedonian population at the age of 14 years is very significant for the bone mass. At this age in male examinees bone mass is in high correlation with the diameter of the knee joint and in females with the diameter of the elbow, so they can serve as most valid sign in maintaining the bone mass. Muscle mass at 14 year age is in correlation with the circumference of the upper arm in males and with total muscle mass in females. Fat structural component at this age is higher in females then in male examinees, and is in high correlation with the body mass.

### Keywords

---

Physical anthropology; body structure; adolescent.